comprises administering to said subject a therapeutically effective amount of one or more compounds selected from the group consisting of an amylin agonist, a leptin, and a CCK.

33. (Twice Amended) The method according to any one of claims 1-15 wherein said exendin agonist is an exendin agonist according to SEQ ID NO. 5, and wherein said method further comprises administering to said subject a therapeutically effective amount of one or more compounds selected from the group consisting of an amylin agonist, a leptin, and a CCK.

REMARKS

In accordance with 37 C.F.R. §1.121, a marked up copy of the amended claims and paragraph of the specification is attached hereto. New language is noted by underlining. Deleted language is noted by bracketing.

Support for the amended paragraph of the specification can be found, for example, on page 16, line 7, to page 17, line 7, of the originally filed application.

Support for the now pending claims can be found throughout the specification including, for example, as noted in the following table:

Claim	Support
20	Page 16, lines 7-18
21	Page 19, line 7, to page 21, line 15
22	Page 23, line 20, to page 26, line 4
32	Page 19, line 7, to page 21, line 15
33	Page 23, line 20, to page 26, line 4

Claims 5 and 6 have been amended to particularly claim the broadest range originally contemplated by the claim. Thus, these amendments add no new matter and are fully supported by the original claims. These amendments were not done for reasons of patentability, as discussed below, and they do not narrow the claims in any way.

Drawings

The Examiner objected to the drawings. Applicants submitted corrected drawings on September 9, 2002 in response to the objection. Applicants believe that the drawings are now in order.

The 35 U.S.C. §112, First Paragraph, Rejection

Claims 1-30 and 32-34 were rejected under 35 U.S.C. §112, first paragraph, as allegedly not enabling one skilled in the art to make and use the invention commensurate in scope with the claims. The PTO alleged that the specification is insufficient to enable the treatment of conditions or disorders that can be alleviated by reducing food intake in a subject including administering a therapeutically effective amount of an exendin or an exendin agonist alone or in combination where the condition or disorder is "obesity, or Type II diabetes, or eating disorder, or insulin-resistance syndrome, and the method is intended to be useful for lowering the plasma glucose level, lowering the plasma lipid level, reducing the cardiac risk, reducing the appetite, and reducing the weight of a subject." This rejection was based on the erroneous statement that "there is/are no working example(s) or data or evidence which shows that the claimed exendin or exendin agonist . . . effect the metabolic intervention to treat conditions or disorders which can be alleviated by reducing food intake in the manner claimed." The PTO was also in error in concluding that "the only support for the claimed therapeutically effective pharmaceutical compositions and method for treating conditions . . . is Applicant's supposition of the invention as recited in the protocols." The rejection is respectfully traversed.

Applicants note, for example, that Examples 1-4 are directed toward showing reduction of food intake in normal and obese rodents. Thus, the application does include working examples, data

and evidence with regard to the ability of exendins and exendin agonists to treat conditions or disorders that can be alleviated by reducing food intake in the manner claimed.

To the extent that the PTO has not credited these animal experiments, Applicants note that it is established in the patent law that *in vivo* tests in animals such as those set forth in the instant application are viewed as acceptably predictive of the success of the claimed methods of treatment in humans and as providing an enabling disclosure under Section 112, first paragraph. The Federal Circuit has held that any other view would confuse the requirements under the law for obtaining a patent with the requirements for obtaining government approval to market a particular drug for human consumption. *See In re Brana*, 34 USPQ2d 1436, (Fed. Cir. 1995); *Scott v. Finney*, 34 F.3d 1058, 1063, 32 USPQ2d 1115, 1120 (Fed. Cir. 1994) ("Testing for the full safety and effectiveness of a prosthetic device is more properly left to the Food and Drug Administration (FDA). Title 35 does not demand that such human testing occur within the confines of Patent and Trademark Office (PTO) proceedings."). Similarly, the CCPA, a predecessor court to the Federal Circuit and whose precedent is binding on it, ruled that proof of an alleged pharmaceutical property for a compound by tests with standard experimental animals is sufficient. *In re Krimmel*, 292 F.2d 948, 953, 130 USPQ 215, 219 (CCPA 1961); *see also In re Bergel*, 292 F.2d 958, 130 USPQ 205 (CCPA 1961). The Federal Circuit further held in *In re Brana*, a disclosure complies with the requirements of 35 U.S.C. Section 112, paragraph 1, even though further research and development is required and – "in particular in the context of pharmaceutical inventions" – expected.

As stated by the Court of Appeals for the Federal Circuit, furthermore, the existence of working examples is only one of several factors that must be considered in assessing enablement of a claimed invention. *In re Wands*, 858 F.2d 731, 737, 740 (Fed. Cir. 1988). This is reiterated in section 2164.02 of the Manual of Patent Examining Procedure (MPEP), which states: "Compliance with the enablement requirement of 35 U.S.C. 112, first paragraph, does not turn on whether an example is disclosed. An example may be 'working' or 'prophetic'." As long as the invention is disclosed in such a manner to allow one skilled in the art to practice the invention without undue experimentation, the enablement requirement is fulfilled. *In re Borkowski*, 422 F.2d 904, 908, 164 USPQ 642, 645 (CCPA 1970). This is consistent with the PTO's directions on assessing

enablement, which are set forth in the MPEP §2164.01. The PTO has not established that any information is missing or could not be supplied by one skilled in the art without undue experimentation.

With regard to the Examiner's discussion of exendin (9-39) at page 5 of the Office Action, Applicants also note that the PTO appears to be confusing the discussion of the effects of the exendin (9-39) – which is an antagonist of exendin as noted at pages 4-5 of the present specification – with the effects of exendins and exendin agonists used in methods of the present invention. Thus, the satiety-inducing effect of GLP-1 was not "reported to be inhibited by ICV injection of exendin," as stated by the PTO. Rather, GLP-1 activity was reported to be inhibited by exendin (9-39), an exendin antagonist.

Again, as reiterated by MPEP §2164.01, the key in an enablement determination is the word "undue," not "experimentation." *See also In re Angstadt*, 537 F.2d 498, 504, 190 USPQ 214, 219 (CCPA 1976). For example, in *In re Wands*, *supra*, applicants claimed a method for the immunoassay of hepatitis B surface antigen by use of high-affinity IgM antibodies. The PTO rejected the claims that were generic to the specified antibodies for alleged want of an enabling disclosure. The Court of Appeals for the Federal Circuit reversed that holding, ruling that one skilled in the art could produce and screen new hybridomas for other monoclonal antibodies falling within the scope of the claims notwithstanding the amount of work this required. Similarly, given Applicants' disclosure and the state of the art, one skilled in the art would be able to carry out the claimed methods.

Despite acknowledging the specification's teachings of various protocols according to the present invention, the Examiner asserts that undue experimentation would be needed to practice the claimed invention because "one can not administer specific effective amount[s] of a pharmaceutical composition in all situations without appropriate testing" (emphasis added). Such is the nature of pharmaceuticals, which always require further testing, and the PTO has not provided any evidence that one of ordinary skill in the art would not be able to practice the claimed invention using the doses and compositions taught.

As a matter of Patent Office practice, a specification disclosure which contains a teaching of the manner and process of making and using the invention in terms which correspond in scope to

those used in describing and defining the subject matter sought to be patented must be taken as in compliance with the enabling requirement of the first paragraph of § 112 unless there is reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support. Reconsideration and withdrawal of this rejection is warranted and is respectfully requested.

The 35 U.S.C. §112, Second Paragraph, Rejection

Claims 5-6, 16-22, 24-27, and 32-34 stand rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as their invention. This rejection is respectfully traversed, and is rendered moot with respect to amended claims 5 and 6, and further with respect to claims 24-27 and 34 due to cancellation of those claims.

For the record, however, Applicants traverse the indefiniteness rejection. The amendments to claims 5 and 6 were not made for reasons related to patentability. The PTO refers to the recitation of two ranges in claim 5 as allegedly necessitating this rejection. The first recited range is about 10 μg to about 5 mg. The second recited range is about 30 μg to about 5 mg. Similarly, the PTO refers to the recitation of two ranges in claim 6 recitation as allegedly necessitating this rejection with respect to claim 6. The first recited range is about 10 μg to about 2 mg. The second recited range is about 30 μg to about 2 mg. Thus, it is clear that the broadest scope of claim 5 is a method wherein about 10 μg to about 5 mg of the exendin or exendin agonist is administered per day and the broadest scope of claim 6 is a method wherein about 10 μg to about 2 mg of the exendin or exendin agonist is administered per day.

Applicants respectfully submit that under the law of indefiniteness, the Examiner's rejection is inappropriate. 35 U.S.C. Section 112, second paragraph, provides that a specification shall include claims "particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." Determining whether a claim is indefinite requires an analysis of "whether one skilled in the art would understand the bounds of the claim when read in light of the specification. . . . If the claims read in light of the specification reasonably apprise those skilled in the art of the scope of the invention, [section] 112 demands no more." *Miles Lab., Inc. v. Shandon Inc.*, 997 F.2d 870, 875, 27 USPQ2d 1123, 1126 (Fed. Cir. 1993), *cert. denied*, 114 S. Ct. 943

(1994); *see also Hybritech Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1385, 231 USPQ 81, 94-95 (Fed. Cir. 1986), *cert. denied*, 480 U.S. 947 (1987). So it is with the instant case. One of ordinary skill in the art can readily understand the metes and bounds of the claimed invention. The claimed ranges are as set forth in the claim, and there is no difficulty in understanding this, as the Examiner has understood it. The meaning of the claims is clear and that is all the law requires.

As stated in *In re Borkowski*, 442 F.2d 904, 909, 164 USPQ 642, 645-46 (CCPA 1970) (footnotes omitted, emphasis in original):

> The first sentence of the second paragraph of §112 is essentially a requirement for *precision and definiteness* of claim language. If the scope of subject matter embraced by a claim is clear, and if the applicant has not otherwise indicated that he intends the claim to be of a different scope, then the claim does particularly point out and distinctly claim the subject matter which the applicant regards as his invention.

The U.S. Court of Appeals for the Federal Circuit recently reiterated this standard for assessing whether a patent claim is sufficiently definite to satisfy 35 U.S.C. §112, second paragraph, in *Exxon Research and Engineering Co. v. U.S.*, 60 USPQ2d 1272 (September 19, 2001). There, citing *Miles Labs., Inc. v. Shandon, Inc.*, 997 F.2d 870, 875, 27 USPQ2d 1123, 1126 (Fed. Cir. 1993), the Court stated: "If one skilled in the art would understand the bounds of the claim when read in light of the specification, then the claim satisfies section 112 paragraph 2." The present claims satisfy 35 U.S.C. §112, second paragraph.

The PTO cites *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), in alleged support of the rejection. This reliance is misplaced and does not endorse the rejection. In that case the issue was the propriety of a rejection under 35 USC 112 based on the examiner's contention that the term "optionally" in claim 1 did not clearly indicate whether the referenced polyamine was intended to be a part of the composition. The Board reversed the rejection, stating, "We have no difficulty determining the scope of claim 1 as drafted. The composition set forth in the claim can consist of the first three components recited or it can include a polyamine as a fourth component. We therefore do not consider the claims to be indefinite as a result of the claimed optional component." There is no discussion of Section 112 in *Wu* beyond this conclusion, with the exception of the denial of the examiner's request for reconsideration of the reversed 112, second

paragraph rejection. The examiner requested reconsideration of that part of the Board's decision reversing the rejection of claims 1-4, 6, 7 and 14-19 under the second paragraph of 35 USC 112. The Board reconsidered its reversal of the rejection under 35 USC 112 in view the examiner's request, but declined "to modify [its] position in any respect."

The PTO also rejected claims 19 and 32-34 as allegedly indefinite based upon inclusion of the acronym "CCK." This acronym, which one of skill in the art would readily recognize as denoting cholecystokinin, is referenced on page 12, line 19, of the originally filed specification, for example. Thus, these claims do particularly point out and distinctly claim the subject matter that Applicants regard as the invention. Accordingly, amendment of the claims in this regard is not necessary and withdrawal of the rejection is respectfully requested.

With respect to claims 20-22 and 32-34, the PTO states that this rejection is based on the fact that the claims refer to Formulae I, II, or III in the specification, rather than being "self-contained" in the claims. Again, there is no basis on which to maintain that one skilled in the art would not understand the bounds of the claim when read in light of the specification. The *Ex parte Fressola*, 27 USPQ2d 1608 (BdPatApp&Int 1993) case cited by the Examiner has no applicability to this one. The disapproved claim in *Fressola* was an "omnibus" claim, and read, "A system for the display of stereographic three-dimensional images of celestial objects as disclosed in the specification and drawings herein." Such claims, while once accepted in American patent practice, have long been prohibited.

On the other hand, it is not *per se* improper to refer to a figure or formula in a claim. *See, e.g., Hormone Research Foundation Inc. v. Genentech Inc.*, 15 USPQ2d 1039, 1041 (Fed. Cir. 1990), where one of the claims at issue read:

> 12. A composition of matter consisting essentially of a synthetic, biologically active substance which has a structure corresponding to FIG. 2 of the accompanying drawing [emphasis added].

Nevertheless, despite the impropriety of this rejection and solely in order to expedite prosecution because the scope of the claim is not altered in any respect, thus preserving all equivalents no matter

Festo and its progeny, claims 20-22 and 32-33 have been revised to replace the formulae referenced therein with the corresponding SEQ ID NOs from the specification.

All of the replacements in the claims that substitute a formula with a corresponding SEQ ID NO are cosmetic and none raise any issue of patentability. Both before and after the above changes, the invention was described in full, clear, concise, and exact terms and met all conditions for patentability under 35 USC 101 *et seq*. Accordingly, the scope of the claims of any resulting patent (and any and all limitations in any of said claims) shall not under any circumstances be limited to their literal terms, but are intended to embrace all equivalents. Under no circumstances whatsoever may these claims be interpreted as:

1. having been altered in any way for any reason related to patentability;
2. having been narrowed;
3. a concession that the invention as patented does not reach as far as the original, unamended claim;
4. a surrender of any subject matter as a condition of receiving a patent; and/or,
5. estopping Applicants from asserting infringement against every equivalent, whether now known or later developed, foreseen or unforeseen.

37 CFR 1.821(d), reads: "Where the description or claims of a patent application discuss a sequence that is set forth in the 'Sequence Listing' in accordance with paragraph (c) of this section, reference must be made to the sequence by use of the sequence identifier, preceded by 'SEQ ID NO:' in the text of the description or claims, even if the sequence is also embedded in the text of the description or claims of the patent application." The MPEP also makes clear that this revision has nothing to do with any matter related to patentability. MPEP Section 2422.03 states in pertinent part: "The rules, in general, or the use of sequence identifiers throughout the specification and claims, specifically, should not raise any issues under 35 U.S.C. 112, first or second paragraphs. The use of sequence identification numbers (SEQ ID NO:X) only provides a shorthand way for applicants to discuss and claim their inventions. These identification numbers do not in any way restrict the manner in which an invention can be claimed." Thus, applicants also emphasize that the decision to address the Examiner's suggestions via claim amendment with the understandings set

forth above cannot and does not in any way avoid the "gatekeeping" role of the PTO with regard to the examination and issuance of valid patents for patentable inventions.

It is believed that the inclusion of claim 34 in this rejection was in error, as none of Formulae I, II, or III is recited in claim 34. In any event, claim 34 has been cancelled without prejudice.

In view of the foregoing, reconsideration and withdrawal of this rejection is respectfully requested.

The 35 U.S.C. §102(b) Rejection

Claims 23-30 and 34 stand rejected under 35 U.S.C. §102(b), as allegedly being anticipated by Eng (U.S. Patent No. 5,424,286). This rejection is respectfully traversed, but is rendered moot due to the cancellation of these claims without prejudice to their inclusion in this or a continuing case.

The 35 U.S.C. §103(a) Rejection

Claims 1-30 and 32-34 stand rejected under 35 U.S.C. §103(a), as allegedly having been obvious within the meaning of the law over Goldstone *et al.* (FEBS Letters, 415:134-8 (1997)) in view of Eng (U.S. Patent No. 5,424,286). This rejection is respectfully traversed based on the content of the references, but the content need not be addressed, as Goldstone is not properly citable against this application. Goldstone *et al.* was published September 29, 1997, and Applicants' priority date for each rejected independent claim (claims 1 and 13-15) reaches back to U.S. Application Serial No. 60/034,905, filed January 7, 1997. For this reason, the §103(a) rejection cannot stand, and Applicants respectfully request that the Examiner withdraw the rejection.

CONCLUSION

Notification of allowance of all claims is respectfully requested. The Examiner is invited to contact Applicants' undersigned representative if it is believed that prosecution may be furthered thereby.

Respectfully submitted,

Dated: 11/7/02

By: _____

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MARKED UP VERSION OF SPECIFICATION

Please replace the paragraph on page 15, lines 15-17, with the following:

--Figure 10 depicts the amino acid sequences for certain exendin agonist compounds useful in the present invention [SEQ ID NOS 9-39]. Each of these amino acid sequences is a species of general formula (I) [SEQ ID NO. 3].--

MARKED UP VERSION OF CLAIMS

5. (Once Amended) The method according to claim 1 wherein about 10 μg[-30 μg] to about 5mg of the exendin or exendin agonist is administered per day.

6. (Once Amended) The method according to claim 1 wherein about 10 μg[-30 μg] to about 2mg of the exendin or exendin agonist is administered per day.

20. (Three Times Amended) The method according to any one of claims 1-15 wherein said exendin agonist is an exendin agonist according to SEQ ID NO. 3 [Formula I].

21. (Three Times Amended) The method according to any one of claims 1-15 wherein said exendin agonist is an exendin agonist according to SEQ ID NO. 4 [Formula II].

22. (Three Times Amended) The method according to any one of claims 1-15 wherein said exendin agonist is an exendin agonist according to SEQ ID NO. 5 [Formula III].

32. (Twice Amended) The method according to any one of claims 1-15 wherein said exendin agonist is an exendin agonist according to SEQ ID NO. 4 [Formula II], and wherein said method further comprises administering to said subject a therapeutically effective amount of one or more compounds selected from the group consisting of an amylin agonist, a leptin, and a CCK.

33. (Twice Amended) The method according to any one of claims 1-15 wherein said exendin agonist is an exendin agonist according to SEQ ID NO. 5 [Formula III], and wherein said method

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further comprises administering to said subject a therapeutically effective amount of one or more compounds selected from the group consisting of an amylin agonist, a leptin, and a CCK.
